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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,546	09/27/2001	Yasuo Yamamoto	110704	9227

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EXAMINER

DEWITTE, CONRAD J

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,546

Applicant(s)

YAMAMOTO ET AL.

Examiner

Conrad J. DeWitte

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. For example, at page 16, line 24 of the specification, Applicant should replace "electron" with "electrode".

Drawings

2. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the charge controller, mentioned in claims 1 and 2 must be shown or the feature canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Vincent, U.S.

Pat. No. 6,045,955 A.

Art Unit: 2673

5. Regarding claim 1, Vincent discloses an image display medium comprising: a pair of facing substrates (Fig. 1B, elements 150, 170); and at least two kinds of particles sealed in a space between the pair of substrates (Fig. 1B, elements 150, 160, 170; col. 5, lines 9-30 (stating that the recording layer 160 seals the microcapsules 100 within itself); Fig. 1A, element 110 (showing that the micro particles 120B,W are sealed within each microcapsule 100)), wherein the at least two kinds of particles have a characteristic that at least one kind of them is positively chargeable and at least one other kind of them is negatively chargeable (col. 4, lines 53-55; Fig. 1C, elements 120B, 120W), and the particles chargeable positively and negatively are of colors different from each other (*id.*), and a charge controller is internally added to one or both of the particles chargeable positively and negatively (col. 4, lines 27-88; Fig. 1A, element 130).

6. Regarding claim 2, Vincent further discloses that the charge controller is colorless, of less coloring capability or of a hue similar to that of the entire particles contained. Col. 4, lines 22-67. The Examiner notes that the color of the sphere 120 implies that the dielectric fluid 130 is clear. *See MPEP* § 2112.

7. Regarding claim 3, Vincent further discloses that one of particles chargeable positively and negatively is white. Col. 4, lines 62-65.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vincent, further in view of Sheridan, U.S. Pat. No. 4,126,854 A.

10. Regarding claim 4, Vincent fails to disclose that the white particles contain a colorant and the colorant is titanium oxide. However, Sheridan does disclose this feature. Col. 3, line 63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vincent and Sheridan because both patents disclose a method for changeably forming images on a medium using multicolored microparticles which are movable using an electric field, and titanium oxide is a common material to make such particles from, as shown by Sheridan.

11. Regarding claim 5, Vincent discloses an image display medium comprising: a pair of facing substrates (Fig. 1B, elements 150, 170); at least two kinds of insulative non-magnetic particles (Fig. 1C, elements 120W, 120B), the two kinds of insulative non-magnetic fine particles being fine particles of colors different from each other (Fig. 1C, elements 120B, 120W). Vincent fails to disclose at least two kinds of insulative non-magnetic particles having frictional chargeability between each other disposed between the substrates; and an electric field generation unit that provides the electric field to the insulative non-magnetic fine particles, the two kinds of insulative non-magnetic fine particles being frictionally chargeable to polarities different from each other. However, Sheridan does disclose at least two kinds of insulative non-magnetic particles having frictional chargeability between each other disposed between the substrates (col. 6, lines 31-33); and an electric field generation unit that provides the electric field to the insulative non-magnetic fine particles (col. 4, lines 11-19), the two kinds of insulative non-

magnetic fine particles being frictionally chargeable to polarities different from each other (col. 6, lines 31-33).

12. Regarding claim 6, Sheridan further discloses that the electric field generation unit comprises a pair of electrodes disposed between the pair of substrates and the fine insulative non-magnetic particles. Col. 4, lines 11-19; Fig. 2, elements 12', 19.

13. Regarding claim 7, Vincent further discloses that the pair of substrates are insulative substrates. Col. 5, lines 46-47; col. 5, lines 34-43.

14. Regarding claim 8, Sheridan further discloses that the electrode is a flat plate electrode connected with a power source. Fig. 2, elements 12', 19.

15. Regarding claim 9, Sheridan further discloses an electric field generation unit that generates an electric field in accordance with images disposed between the pair of substrates. Col. 4, lines 6-25.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Yamaguchi et al., U.S. Pat. No. 6,636,186 B1 (disclosing an image display medium, device, and method)
- Yamaguchi et al., U.S. Pat. No. 6,407,763 B1 (disclosing an image display medium, image-forming method, and image-forming apparatus capable of repetitive writing on the image display medium)
- Sheridan et al., U.S. Pat. No. 6,362,915 B1 (disclosing bichromal beads having crystalline materials therein)

- Hattori et al., U.S. Pat. No. 6,025,896 A (disclosing a display device)
- Haas et al., U.S. Pat. No. 3,875,576 A (disclosing an electrostatic imaging system with magnetic toner)
- Ota, U.S. Pat. No. 3,756,693 A (disclosing an electrophoretic display device)
- Machida et al., U.S. Pub. Appl'n No. 2002/0033793 (disclosing an image display medium driving method and image display device)
- Yoshihara et al., Jap. Pat. No. 5-173193 A (disclosing a dispersed system for electrophoretic display and an electrophoretic display element using the dispersed system)
- Hanji, Jap. Pat. No. JP 1-134347 A (disclosing an electrophoretic display device)
- Defendini et al., Jap. Pat. No. 5-178645 A (disclosing electrochromatic window glass)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Conrad J. DeWitte whose telephone number is (703) 305-8626. The examiner can normally be reached on Monday through Friday, 8 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


CJD


JOSEPH MANCUSO
PRIMARY EXAMINER